

Amendment

In the Claims

Please amend the claims of this application as shown below:

1. (currently amended) An electric drive vehicle comprising:

a frame;

a wheel, having a hub with at least one sprocket, said wheel rotatably mounted in said frame;

an electric motor, having a rotatable assembly and a fixed assembly, said motor mounted to said frame by said fixed assembly;

a sprocket fixedly mounted to said rotatable assembly of said motor;

a chain engaged to said motor sprocket and a sprocket on said hub for transferring rotary motion from said motor to said wheel;

a pedal crank assembly rotatably mounted in said frame;

a single stage, uni-directional, up-speed drive engaging the rotatable assembly of said motor and said pedal crank assembly for transferring rotary motion from said pedal crank to said motor, but not from said motor to said crank,

whereby said vehicle can be driven either said motor or by said pedal crank can drive said vehicle, independently or, through said motor, or by said motor alone without turning said pedal crank, or by both said pedal crank and said motor in unison.

2. (previously presented) The electric drive vehicle of claim 1, wherein said vehicle is a bicycle and wherein said hub is a multi-speed hub.
3. (previously presented) The electric drive bicycle of claim 2, wherein said multi-speed hub has internal gears that can be shifted.
4. (previously presented) The electric drive bicycle of claim 2, wherein said multi-speed hub has two or more sprockets on a freewheel, and a corresponding derailleur that can shift the chain to engage any of said sprockets.
5. (currently amended) The electric drive vehicle of claim 1, wherein said electric motor is ~~a brush-less, direct current, slow speed, gear-less motor~~ and gearless, and wherein said motor is ~~connected to a power supply, in electrical communication with an electrical power source,~~ whereby said pedal crank can efficiently drive said motor for recharging the ~~power supply~~ electrical power source.
6. (previously presented) An electric drive vehicle comprising:
 - a frame;
 - a wheel, having a hub with at least one sprocket, the wheel rotatably mounted in said frame;
 - an electric motor, having a rotatable assembly and a fixed assembly, said motor mounted to said frame by said fixed assembly;
 - a jackshaft rotatably mounted to the frame;
 - a first sprocket fixedly mounted to said rotatable motor assembly;

a second sprocket fixedly mounted to the jackshaft;
a first chain engaged to said first motor sprocket and the second sprocket on the jackshaft for transferring rotary motion between said motor and said jackshaft;
a third sprocket fixedly mounted to said jackshaft;
a second chain engaged to said third jackshaft sprocket and a hub sprocket for transferring rotary motion from said jackshaft to said wheel;
a pedal crank assembly rotatably mounted in said frame; and
a uni-directional drive engaging the jackshaft and said pedal crank assembly for transferring rotary motion from said pedal crank to said jackshaft, but not from said jackshaft to said crank,
whereby either said motor or said pedal crank can drive said vehicle, independently or in unison.

7. (previously presented) The electric drive vehicle of claim 6, wherein said vehicle is a bicycle and wherein said hub is a multi-speed hub.
8. (previously presented) The electric drive bicycle of claim 7, wherein said multi-speed hub has internal gears that can be shifted.
9. (previously presented) The electric drive bicycle of claim 7, wherein said multi-speed hub has two or more sprockets on a freewheel, and a corresponding derailleur that can shift the second chain to engage any of said sprockets.

10. (previously presented) The electric drive vehicle of claim 6, wherein said electric motor is a brush-less, direct current, slow speed, gear-less motor, and wherein said motor is connected to a power supply,
whereby said pedal crank can efficiently drive said motor for recharging the power supply.

11.-43. (canceled).

44. (currently amended) A method of providing an electric drive on a pedal powered vehicle, the vehicle having a frame, a wheel with a hub and at least one sprocket, and a pedal crank, comprising:
providing an electric motor, having a rotatable assembly and a fixed assembly;
fixedly mounting said fixed motor assembly to the frame of said vehicle;
fixedly mounting a sprocket to said rotatable assembly of said motor;
engaging a first chain around said sprocket on said motor and a sprocket on said hub;
engaging a single stage uni-directional up-speed drive between the rotatable assembly of said motor and said pedal crank assembly for transferring rotary motion from said pedal crank to said motor, but not from said motor to said crank,
whereby ~~either said motor or said pedal crank can drive said vehicle independently or in unison.~~ said vehicle can be driven either by said pedal crank, through said motor, or by said motor alone without turning said pedal crank, or by both said pedal crank and said motor in unison.

45. (previously presented) The electric drive method of claim 44, wherein said vehicle is a bicycle and wherein said hub is a multi-speed hub.

46. (previously presented) The electric drive method of claim 45, wherein said multi-speed hub has internal gears that can be shifted.

47. (previously presented) The electric drive method of claim 45, wherein said multi-speed rear hub has two or more sprockets on a freewheel, and a corresponding derailleur that can shift the said first drive chain to engage any of said sprockets.

48. (currently amended) The electric drive method of claim 44, wherein said electric motor is a ~~brush-less, direct current, slow speed, gear-less motor and gearless,~~ and wherein said motor is connected to a power supply, in electrical communication with an electrical power source, whereby said pedal crank can efficiently drive said motor for recharging the ~~power supply~~ electrical power source.

49. (previously presented) A method for providing an electric drive on a pedal powered vehicle, the vehicle having a frame, a wheel with a hub and at least one sprocket, and a pedal crank, comprising:
- providing an electric motor, having a rotatable assembly and a fixed assembly;
- fixedly mounting said fixed motor assembly to the frame of said vehicle;
- rotatably mounting a jackshaft to said frame;
- mounting a first sprocket fixedly mounted to said rotatable motor assembly;
- mounting a second sprocket fixedly mounted to the jackshaft;
- engaging a first chain to said first motor sprocket and the second sprocket on the jackshaft for
- transferring rotary motion between said motor and said jackshaft;
- fixedly mounting a third sprocket to said jackshaft;
- engaging a chain to said jackshaft sprocket and a hub sprocket for transferring rotary motion
- from said jackshaft to said wheel; and
- engaging a uni-directional drive between the jackshaft and said pedal crank assembly for
- transferring rotary motion from said pedal crank to said jackshaft, but not from said
- jackshaft to said crank,
- whereby either said motor or said pedal crank can drive said vehicle, independently or in unison.
50. (previously presented) The electric drive method of claim 49, wherein said vehicle is a bicycle and wherein said hub is a multi-speed hub.
51. (previously presented) The electric drive method of claim 50, wherein said multi-speed hub has internal gears that can be shifted.

52. (previously presented) The electric drive method of claim 50, wherein said multi-speed rear hub has two or more sprockets on a freewheel, and a corresponding derailleur that can shift the said drive chain to engage any of said sprockets.
53. (previously presented) The electric drive method of claim 49, wherein said electric motor is a brush-less, direct current, slow speed, gear-less motor, and wherein said motor is connected to a power supply, whereby said pedal crank can efficiently drive said motor for recharging the power supply.
54. (currently amended) A mechanism for providing an electric drive on a pedal powered vehicle, the vehicle having a frame, a wheel with a hub and at least one sprocket, and a pedal crank, comprising:
- an electric motor, having a rotatable assembly and a fixed assembly, said motor mounted to said frame by said fixed assembly;
 - a sprocket fixedly mounted to said rotatable assembly of said motor;
 - a chain engaged to said motor sprocket and a sprocket on said hub for transferring rotary motion from said motor to said wheel;
 - a pedal crank assembly rotatably mounted in said frame; and
 - a single stage, uni-directional, up-speed drive engaging the rotatable assembly of said motor and said pedal crank assembly for transferring rotary motion from said pedal crank to said motor, but not from said motor to said crank,

whereby said vehicle can be driven either said motor or by said pedal crank ~~can drive said vehicle,~~
~~independently or in unison,~~ through said motor, or by said motor alone without turning said
pedal crank, or by both said pedal crank and said motor in unison.

55. (previously presented) The mechanism of claim 54, wherein said vehicle is a bicycle and wherein said hub is a multi-speed hub.

56. (previously presented) The mechanism of claim 55, wherein said multi-speed hub has internal gears that can be shifted.

57. (previously presented) The mechanism of claim 55, wherein said multi-speed hub has two or more sprockets on a freewheel, and a corresponding derailleur that can shift the chain to engage any of said sprockets.

58. (currently amended) The mechanism of claim 54, wherein said electric motor is a ~~brush-~~
~~less, direct current, slow speed, gear-less motor~~ and gearless, and wherein said motor is
~~connected to a power supply,~~ in electrical communication with an electrical power source,
whereby said pedal crank can efficiently drive said motor for recharging the ~~power supply~~
electrical power source.

59. (previously presented) A mechanism for providing an electric drive on a pedal powered vehicle, the vehicle having a frame, a wheel with a hub and at least one sprocket, and a pedal crank, comprising:
- an electric motor, having a rotatable assembly and a fixed assembly, said motor mounted to said frame by said fixed assembly;
 - a jackshaft rotatably mounted to the frame;
 - a reduction drive mounted on the higher speed side to said rotatable motor assembly and on the lower speed side to said jackshaft for transferring rotary motion from said motor to said jackshaft and vise versa;
 - a sprocket fixedly mounted to said jackshaft;
 - a chain engaged to said jackshaft sprocket and a hub sprocket for transferring rotary motion from said jackshaft to said wheel;
 - a pedal crank assembly rotatably mounted in said frame; and
 - a uni-directional drive engaging said jackshaft and said pedal crank assembly for transferring rotary motion from said pedal crank to said jackshaft,
- whereby either said motor or said pedal crank can drive said vehicle, independently or in unison.
60. (previously presented) The mechanism of claim 59, wherein said vehicle is a bicycle and wherein said hub is a multi-speed hub.
61. (previously presented) The mechanism of claim 60, wherein said multi-speed hub has internal gears that can be shifted.

62. (previously presented) The mechanism of claim 60, wherein said multi-speed hub has two or more sprockets on a freewheel, and a corresponding derailleur that can shift the chain to engage any of said sprockets.
63. (previously presented) The mechanism of claim 59, wherein said electric motor is a brush-less, direct current, slow speed, gear-less motor, and wherein said motor is connected to a power supply, whereby said pedal crank can efficiently drive said motor for recharging the power supply.
64. (new) The electric drive vehicle of claim 1, wherein said electric motor is a wheel hub motor.
65. (new) The electric drive method of claim 44, wherein said electric motor is a wheel hub motor.
66. (new) The mechanism of claim 54, wherein said electric motor is a wheel hub motor.